

## Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address your letters to the Creamery Department.

### The Butter Situation

"What do you hear on butter?" is a question that has been put to our Editor by more than one dealer in the trade, says the Trade Bulletin, and to be candid we would far sooner tell what we hear, than to venture an opinion of our own on a subject so difficult to deal with at the present time. From enquiries we find there is an opinion in the trade that the disposition of our surplus butter this season will depend largely upon the demand from Great Britain; and this has already set in to a limited extent. Recent advices from England by mail speak of a probable early make of Australian, one report stating that Australia expected to start shipping at the end of August. If this were so, the first shipments would arrive in England about the middle of October. The report also states that with favorable weather conditions, the Australian make would increase 50 per cent. over that of last year. Then it is reported that stocks of Siberian butter are accumulating at the principal ports of Russia, it being estimated that about 75,000 casks are stored at Baltic ports. A well known exporter stated to the writer that he "considered butter all right for a long pull" and that "if prices in the United States moved up a cent or two more, there would be a chance to unload a considerable portion of our surplus stocks in that market."

### To Figure Over-Run in Butter\*

What is the over-run in butter? My brother patrons and myself would be glad to figure the over-run. We hear a lot of talk about the over-run but a lot of us know how to figure it out—J. McK. Sherbrooke, Que.

Over-run in butter is the amount of water, casing and salt incorporated in the butter-fat in making butter. Creamery over-run, however, should always be computed from the number of pounds of butter fat received and the pounds of butter sold.

The formula for calculating over-run in percentage is as follows: (Pounds of butter made—pounds of butter-fat received) ÷ pounds of butter-fat received × 100 = per cent. over-run.

In a whole milk creamery, it is possible to obtain from 18 to 20 per cent. over-run and have only 14 to 14½ per cent. moisture in the butter, while in a creamery where hand separator cream is received, 20 to 22 per cent. over-run can be obtained. This is shown by the following two examples:

#### FORMULA FOR FIGURING LOSSES AND OVER-RUN.

Example: 10,000 lbs. 4 per cent. milk contains 400 lbs. butter fat  
10,000 lbs. 4 per cent. milk gives 1,600 lbs. 24 + ½ per cent. cream and 8,400 lbs. skim milk.

1,000 lbs. cream testing 24 + per cent. contains 391.6 lbs. butter-fat.

8,400 lbs. of skim milk, loss (maximum) .1 per cent. is 8.4 lbs. butter-fat.

1,000 lbs. cream loss 391.6 lbs. butter-fat, leaves 1,208.4 lbs. butter-milk.

1,208.4 lbs. butter-milk at .2 per cent. loss is 2.4 lbs. butter-fat, the loss in churning.

8.4 lbs. butter-fat, loss in skim milk and 2.4 lbs. butter-fat loss in but-

termilk, gives 10.8 lbs. butter-fat loss in both.

10.8 lbs. butter-fat from 400 lbs. butter-fat leaves 389.2 lbs. of butter-fat to be churned into butter.

If 389.2 lbs. butter-fat is churned into butter containing 14 per cent. water and 4 per cent. salt and casing, it will make 474.6 lbs. of butter.

474.6 lbs. loss 400 lbs. gives 74.6 lbs. of butter, which is the over-run.

74.6 lbs. of butter times 100 makes 7,460 divided by 400 gives 18.6 per cent. over-run.

#### HAND SEPARATOR CREAMERY.

Example:

1,600 lbs. of cream testing 25 per cent. contains 400 lbs. of butter-fat.

1,000 lbs. loss 400 lbs. of butter-fat leaves 1,200 lbs. of buttermilk.

.2 per cent. loss in churning gives 2.4 lbs. butter-fat loss.

400 lbs. of butter-fat less 2.4 lbs. butter-fat gives 397.6 lbs. of butter-fat to be churned into butter.

If this amount of butter-fat is churned into butter which contains 14 per cent. water, and 4 per cent. salt, casing, etc., it will make 484.8 lbs. of butter.

484.8 lbs. loss 400 lbs. gives 84.8 lbs. of butter, which is the over-run.

84.8 lbs. times 100 is 8,480 divided by 400 gives 21.2 per cent. over-run.

### The Hand or Farm Separator

To the cream separator is due the great expansion of the cream gathering system and its popularity today in nearly every country where good butter is made. In 1886 the small hand separator for use on farms and in small dairies made its appearance. It is safe to say that it has effected a greater revolution in butter-making than the introduction of the centrifugal force in cream separation in the first instance. The chief business of the cream separator manufacturer today is to turn out a machine that will best meet the needs of the farmer who keeps a few cows and will give him the best service for the money expended. The hand or farm separator as it is often called, is as common in every dairy country today as to excite no comment.

And yet the most skillful workmanship and the services of the best trained artisans are required in its manufacture. If it does not run true and the material of which it is made is not of the very best, it will not do the work it is intended to do. The farmer who buys a cream separator believes in his possession one of the finest pieces of mechanism that the ingenuity of man has produced. And still it too often receives less care from him than he gives his wheelbarrow or cultivator.

#### SELLING THE MACHINES.

Here at home we find the hand separator reaching out to all parts of Canada. It would be interesting to know how many for instance have been placed on farms in Ontario during the past five years. The number must be away up in the thousands. And the end is not yet. There are more different makes being handled to-day than ever before and each year sees the number sold increased by many hundreds. There are about as many avenues and ways of selling separators as there are of selling harvesting machines. The chief work, however, is done by agents representing the manufacturer. Upon these individuals depend largely not only how many are sold but also upon how the machine will be cared for and handled by the purchaser. The agent, who sells the most machines does not always render his employer the best service. By making extravagant claims, such as that his separator only needs a thorough cleaning occasional skimming is to run through some warm water, etc. One agent may sell

twice as many machines as another, who is too honest to make such claims. The former may sell more machines, but if the method of care he advocates instructs the buyer carefully as to the kind of machine he has purchased and the need for observing the strictest cleanliness in operating it, is rendering the manufacturer and the dairy industry, as well, the better service.

#### SPECIAL COURSE FOR AGENTS

But he that as it may, the separator agent is an important factor in providing better dairying methods among the farmers of the country. So important is he that the dairy schools might well consider the establishment of special courses of study for separator agents. Such courses need not necessarily deal with the mechanism of separators. It is presumed that a person engaged to sell separators would know all of the machine he is offering to the public, and considerable about the kind his competitors are offering also. But what would be advisable in a course of this kind, would be a thorough drilling on what milk is, how easily it may be contaminated by unsanitary or uncleanly conditions, how necessary it is to keep the separator always clean and sweet, and how to properly care for the cream so as to make the best quality of butter. An agent thus equipped better and be in a position to assist the dairy industry very materially by instructing buyers of separators how to care for the milk and the road to-day already has this information. But it does not do anyone any harm to brush up now and again

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and familiarize himself with the latest developments in the business in which he is engaged. For instance, one of the needs of the creamery business is thicker cream. Pointers of this kind are valuable for the agent to know, and the more he knows the greater his influence will be with intending purchasers.—J. W. W.

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\*The answer to this question is taken from Bulletin No. 93, of the Pennsylvania State College.